

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY  
OPERATING PERMIT TECHNICAL REVIEW DOCUMENT**

**Permitting and Compliance Division  
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Roseburg Forest Products  
Missoula Particleboard Facility  
Section 8, Township 13 North, Range 19 West, Missoula County, Montana  
3300 Raser Road  
P.O. Box 4007  
Missoula, Montana 59806

The following table summarizes the air quality programs testing, monitoring, and reporting requirements applicable to this facility.

<b>Facility Compliance Requirements</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
Source Tests Required	X		Method 5, Method 9, Method 201A, Method 202, Method 7E, Method 10, Method 18, Method 25, and Method 25A.
Ambient Monitoring Required		X	
COMS Required		X	
CEMS Required		X	
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		
Monthly Reporting Required		X	
Quarterly Reporting Required		X	
<b>Applicable Air Quality Programs</b>			
ARM Subchapter 7 MAQP Permitting	X		MAQP #2303-17
New Source Performance Standards (NSPS)		X	
National Emission Standards for Hazardous Air Pollutants (NESHAPS)	X		40 CFR 61, Subpart M
Maximum Achievable Control Technology (MACT)	X		40 CFR 63, Subparts A, DDDD, DDDDD, ZZZZ
Major New Source Review (NSR) – includes Prevention of Significant Deterioration (PSD) and/or Non-attainment Area (NAA) NSR	X		
Risk Management Plan Required (RMP)		X	
Acid Rain Title IV		X	
Compliance Assurance Monitoring (CAM)	X		Appendix E of Operating Permit
State Implementation Plan (SIP)	X		General SIP

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## SECTION I. GENERAL INFORMATION

### A. Purpose

This document establishes the basis for the decisions made regarding the applicable requirements, monitoring plan, and compliance status of emission units affected by the operating permit proposed for this facility. The document is intended for reference during review of the proposed permit by the U.S. Environmental Protection Agency (EPA) and the public. It is also intended to provide background information not included in the operating permit and to document issues that may become important during modifications or renewals of the permit. Conclusions in this document are based on information provided in the renewal application submitted by Roseburg Forest Products (Roseburg) on January 8, 2007, associated correspondence submitted on March 6 and June 26, 2007, the application for a routine control device maintenance exemption submitted on August 31, 2007, various de minimis notifications, significant modification permit application submitted on September 15, 2008, administrative amendment request received September 2, 2010, permit modification and renewal application received on March 30, 2012, administrative amendment request received on June 18, 2012.

### B. Facility Location

Roseburg's Missoula Particleboard Plant is located in Missoula County, Montana, approximately 1 mile northwest of the city limits of Missoula on Raser Road. The 189-acre site is located in the NW¼ of the SW ¼ of Section 8, Township 13 North, Range 19 West. The mill is located in an industrial area with no critical receptors within one mile.

### C. Facility Background Information

#### MAQP History

On September 16, 1986, Louisiana-Pacific (LP) was granted a general Montana Air Quality Permit (MAQP) for their particle board plant, including the plant expansion and other related equipment, located near Missoula, in Missoula County, Montana. The application was given **MAQP #2303**.

The particle board plant existed in the Missoula area prior to 1968 and operated under **MAQP #1274**. The original mill had a capacity of 100 million square feet (MMft<sup>2</sup>) of ¾-inch particle board. LP expanded the mill capacity in 1987 by 50%, using the offsets provided by the closure of the Evans Products plant. The expanded mill had a capacity of 150 MMft<sup>2</sup> of ¾-inch particle board. The mill consisted of four rotary dryers, which were heated by the exhaust gases from the sander dust boiler, sander dust burner, and natural gas burners. The old press line utilized a batch press with a capacity of 100 MMft<sup>2</sup> of particle board on a ¾-inch basis. The 1987 expansion added two new wood particle dryers, two new predryers with a Coen sander dust burner, and a new press line with a continuous press. A GEKA200 natural gas heater was also added to heat the new press line.

The first MAQP modification, to add general fugitive dust control measures to the facility, was issued on March 20, 1992, and was given **MAQP #2303-M**. On July 1, 1987, EPA promulgated new ambient air quality standards for particulate matter with an aerodynamic diameter of ten microns or less (PM<sub>10</sub>). The annual standard is 50 micrograms per cubic meter (ug/m<sup>3</sup>) and the 24-hour standard is 150 ug/m<sup>3</sup>. These standards were, in turn, adopted by the Montana Board of Environmental Review (Board) on April 15, 1988. Due to violations of these standards, Missoula was designated as a PM<sub>10</sub> nonattainment area. As a result of this designation, the Department of Environmental Quality (Department) and the Missoula County Air Pollution Control Agency (Missoula County) developed a plan to control these emissions and bring the area into compliance with the federal and state ambient air quality standards.

In order to identify the emission sources that were contributing to the violation of the PM<sub>10</sub> standard, Missoula County conducted a chemical mass balance study (CMB) of the area. The LP mill was not identified as a significant contributor to the problem by this method, but fugitive dust was a problem at the plant and was addressed at all other point sources in nonattainment areas. Therefore, a MAQP modification was required in order to add general fugitive dust control measures to this facility. Since the State implementation Plan (SIP) process did not identify this source as a significant contributor to the Missoula nonattainment problem, no emission limitations were changed or added to the MAQP. Only cyclone-controlled and fugitive dust sources were addressed in detail. MAQP #2303-M replaced MAQP #2303.

On August 9, 1993, **MAQP #2303-02** was issued to LP for an alteration to their existing MAQP to install a baghouse and controls to reduce emissions from an existing outside truck dump. The outside truck dump was located at the southeastern end of the LP facility.

The baghouse would pull approximately 27,470 cubic feet per minute (cfm) of air through the top of the existing surge bin on the truck dump. The surge bin is partially shrouded to allow air to enter along the top and sides of the truck when in the dumping position. The air is pulled towards the back and top of the shrouded surge bin and through the baghouse system. The efficiency of the baghouse is estimated to be 99.99%; however, the reduction of fugitive dust emissions was reduced by the amount of air that can be drawn through the baghouse system. With proper manifold ducting and skirting, an estimated average reduction of 90% fugitive emissions was expected. MAQP #2303-02 replaced MAQP #2303-M.

LP was issued **MAQP#2303-03** on March 10, 1995, to replace two existing baghouses (BH100 and BH101) at the Missoula facility with two new baghouses. LP replaced the existing 26,680-cfm Clark baghouse on source PC 401A (forming machine) with a new 35,000-cfm Day Division Model 376 RFW<sub>10</sub> baghouse (BH100). In addition, LP replaced the existing 26,680-cfm Clark baghouse on source PC 401B (forming machine) with a new 5,400-cfm Day Division Model 48 RFW-8 baghouse (BH101). The MAQP alteration resulted in a decrease of particulate matter (PM) emissions of approximately 10 tons per year (TPY) because the combined flow from the new baghouses was less than the combined air flow from the two existing baghouses. MAQP #2303-03 replaced MAQP #2303-02.

**MAQP #2303-04** was issued to LP on March 9, 1997, to change the allowable particulate emission limitations for the baghouses, cyclones, particle board press vents, and the continuous press vents to more accurately reflect the actual particulate emissions from these sources. The majority of the emission limitations were decreased, although the cyclone and press vent fan limits were increased. Overall, the allowable emissions of the facility decreased by approximately 208 tons of PM per year.

In addition, the alteration allowed LP to increase the outside storage capacity of the contaminated floor sweepings enclosure from 50 cubic yards (yd<sup>3</sup>) to 50 units (370 yd<sup>3</sup>). A condition in MAQP #2303-03 required that a control strategy for particulate be employed, which resulted in no increase in associated fugitive emissions. The control strategy proposed by LP included containing the contaminated floor sweepings within the three-sided enclosure and covering the exposed sides with a screen. The Department approved this control strategy with the caveat that if the fugitive emissions were not controlled by the screen, the Department would require an alternative control strategy be employed. Finally, MAQP #2303-04 clarified MAQP conditions, updated the facility's configuration, incorporated **MAQP #1274**, and updated the MAQP with current rule citations and MAQP language.

**MAQP #2303-05** was issued to LP on June 29, 1997, after LP requested that the Department modify the MAQP to clarify language concerning the electric eye in the sander dust boiler abort stack. The language was changed to require corrective action when emissions to atmosphere exceeded 20%. The

electric eye monitors the boiler exhaust gas, even when it is not being emitted directly to atmosphere. A sentence stating that data from the monitor need not be recorded unless required by the Department was also put back into the MAQP.

**MAQP #2303-06** was issued on July 6, 1998. LP requested that the Department modify the requirements for the contaminated floor sweepings from a fixed screen, for the control of fugitives, to a fixed roof enclosure. Emissions were expected to decrease with this modification, as the new roof would improve the control of fugitives, offering more protection than the screen system being replaced. The new roof also facilitated the loading and unloading of sweepings from the three-sided bunker. The above floor sweepings bunker was allowed by the previous MAQP, and this MAQP modification simply updated the MAQP to recognize the improvement to the storage bunker.

**MAQP #2303-07** was issued to LP on May 17, 1999. This MAQP alteration allowed LP to rebuild the Line 1 press. The rebuilt press was expected to result in smoother board from Line 1, and thus a decrease in the amount of sanding necessary. The reduced sanding was expected to decrease the sander dust burned at the facility. LP decided to make up the additional heat requirement with natural gas.

The rebuild of the press allowed LP to increase production of Line 1 from approximately 131 MMft<sup>2</sup>/year to 160 MMft<sup>2</sup>/year. All emissions resulting from the debottlenecking were considered, to determine whether the change would result in a major modification subject to the requirements of the New Source Review Program (NSR) and, in particular, the Prevention of Significant Deterioration (PSD) requirements.

LP proposed, and the Department agreed, to base the actual emissions from the facility on the years 1993 and 1994. The years 1993 and 1994 were considered most representative for Line 1 because of the degradation of the press during the last several years. Based on the past actual to future potential test, the emissions from the press project would exceed significance levels for both PM and PM<sub>10</sub>. However, because of the addition of new control equipment, LP reduced the net emission increases of PM and PM<sub>10</sub> to less than significance levels. Therefore, the requirements of the NSR/PSD program did not apply to this project.

As part of this MAQP action, LP proposed to implement the following emission controls at the facility:

1. A cover and curtains over the Line 2 Reject Dump;
2. A cover over the reclaim hopper;
3. A cover over the lift portion of the outside truck dump;
4. A baghouse in milling and drying (M&D) to control three dryer loop vents and the coarse refiner loop vent;
5. A limit on the allowable emissions from the dryers and from the raw material handling fugitives;
6. A limit on the amount of sander dust which may be combusted in the Coen Burner; and
7. A change in the use of process wax addition to reduce evaporative losses. The wax injection to the sawdust was changed from injection prior to the dryers to injection after the dryers.

The method of calculating the emissions from the raw material handling at the facility was also modified in this MAQP. The control efficiencies for several of the processes increased because of the additional controls required by the MAQP. The control efficiency for the outside truck dump increased from 90% to 99% because LP was required to install a full cover over the lift portion of the truck dump. The control efficiency for the pile reclaim hopper increased from 0% to 50% because LP

constructed an earthen berm around the exposed sides of the pile and was required by MAQP to install a cover over the hopper. The control efficiency for the radial stacker increased from 25% to 50% because of the construction of the earthen berm.

The testing requirements for the dryers and predryers were modified in this MAQP to require the testing of each dryer and predryer once every 5-years. The previous testing requirement was inconsistent with other sources. MAQP #2303-07 replaced MAQP #2303-06.

On August 24, 2000, LP was issued **MAQP #2303-08** in accordance with NSR/PSD. LP requested an alteration to their MAQP on January 7, 2000. The Department requested additional information from LP and received the final submittal on June 9, 2000. In 1979, LP installed a 50-million British thermal unit per hour (MMBtu/hr) Roemmc sander dust/natural gas-fired burner, replaced the original bullnose line with Bullnose #1, and made various changes to baghouses and wood waste handling systems. In 1986-1987, LP installed a second production line (Line 2) with associated sources, a 35-MMBtu/hr Coen sander dust/natural gas-fired burner, Predryers 1 and 2, and the GEKA200.

In 1991, LP installed Bullnose #2. The changes made in each of these years triggered the NSR program for PSD regulations; however, none of the changes were permitted at the time through the PSD regulations. In 1979, LP triggered the PSD regulations for carbon monoxide (CO) and NO<sub>x</sub>. In 1986-1987, LP triggered the PSD regulations for NO<sub>x</sub> and Volatile Organic Compounds (VOCs). In 1991, LP triggered the PSD regulations for VOCs. LP proposed to permit the 1979, 1986-1987, and 1991 changes in accordance with the PSD regulations. MAQP #2303-08 replaced MAQP #2303-07.

The Department received comments from LP on the preliminary determination (PD) on August 3, 2000. Based on the comments submitted by LP, several changes were made to the MAQP prior to issuance of the Department decision (DD). Most notably, the emission limits for both the Coen and the Roemmc burners were changed. The NO<sub>x</sub>, CO, and VOC emission limits placed in the PD for the Coen Burner were calculated by averaging the emissions from burning sander dust and natural gas. While LP could easily comply with this limit while burning natural gas, they would be unable to comply with this limit while burning sander dust. The Department changed the limit in the MAQP to correspond with the emissions from burning sander dust. However, LP was required to burn sander dust during any compliance source tests that are conducted to monitor compliance with the NO<sub>x</sub> and CO emission limits for the Coen Burner.

LP requested an increase in the NO<sub>x</sub> emission limit for the Roemmc Burner. LP submitted supporting information with their PD comments indicating that the plant would have problems complying with the limit in the PD during the winter months. Because the Department determined that “no additional control” constitutes the Best Available Control Technology (BACT) for NO<sub>x</sub>, CO, and VOC emissions, the Department determined that changing the emission limit for NO<sub>x</sub> and CO would be appropriate. The Department based the new emission limits on the emission factors proposed by LP in MAQP Application #2303-08 and on the unit operating at 2 tons per hour. A complete copy of LP’s comments on the PD and the Department’s responses to the comments are on file with the Department.

On March 2, 2001, LP was issued **MAQP #2303-09** by the Department for a change in emission limits for the Roemmc Burner. Based on more recent source test information, LP requested new emission limits for the Roemmc Burner that more accurately reflected the emissions from the unit. The emission limits for NO<sub>x</sub>, CO, and VOC were increased for the Roemmc Burner during this MAQP action. Furthermore, the Department removed the requirements and limitations regarding cyclones from the MAQP, because there are no longer any cyclones that are considered emitting units at LP. All cyclones have either been completely removed from the facility or are no longer attached and in use at the facility.

Because the previous PSD permit determination (MAQP #2303-08) was made using the information that was submitted/discussed with LP, the Department determined that the changes required another analysis of the PSD issue as they related to the Roemmc Burner. All affected portions of the previous application that changed were required to be resubmitted using the new emission limits that LP proposed. MAQP #2303-09 replaced MAQP #2303-08.

On April 24, 2001, the Department received an application (**MAQP Application #2303-10**) from LP for the addition of three temporary natural gas-fired turbines. The turbines were capable of generating approximately 4.5 megawatts of electrical power per turbine. They requested to install the generators/turbines to offset the high cost of power at the time. After submittal of the MAQP application, but before issuance of a preliminary determination, LP submitted a request to withdraw the MAQP application.

**MAQP #2303-11** was issued on August 7, 2002, based on a de minimis modification notice and corresponding modification request to minimize the fire hazard in their M&D operations. The proposal was to install an additional pneumatic line to collect dust in the M&D belt room. The new line connects to the existing M&D baghouse (BH55). Although the emission limit for the baghouse would remain the same, the flow through the baghouse would change from 18,000 dry standard cubic feet per minute (dscfm) to 32,000 dscfm. The MAQP change was necessary to change the flowrate limit on the baghouse. In addition, the source test frequency for the Roemmc Burner was changed to once every five years. LP requested the change to account for safety concerns that arise during the testing of the Roemmc. MAQP #2303-11 replaced MAQP #2303-09.

On February 21, 2003, LP and Roseburg submitted a request to transfer the MAQP for the facility from LP to Roseburg. The permitting action was an administrative amendment and updated rule citations in the MAQP. **MAQP #2303-12** replaced MAQP #2303-11.

On October 3, 2005, the Department received a complete MAQP application from Roseburg. Roseburg requested that the Department modify MAQP #2303-12. Roseburg proposed to reconfigure the particleboard predry process involving the removal of one of two predryers and the replacement of the existing Coen sander dust burner with a new direct-fired, low- NO<sub>x</sub> burner with dryer gas recirculation. In addition, Roseburg proposed to install a wet electrostatic precipitator (WESP) on the predryer exhaust to control combustion and dryer emissions.

The single predryer is configured so that approximately 50% of its exhaust gases are reintroduced into the duct immediately preceding the predryer drum. This allows the heat to be used more efficiently by increasing the humidity in the predryer to increase heat transfer. Configuring the predry system in this manner resulted in the ability to dry a greater quantity of green sawdust at a higher inlet temperature. Dried sawdust is directed to a storage silo that is controlled with a baghouse. **MAQP #2303-13** replaced MAQP #2303-12.

On August 14, 2007, the Department received a complete permit application from Roseburg requesting that the Department modify MAQP #2303-13. Roseburg proposed to install a Regenerative Thermal Oxidizer (RTO) to control emissions of volatile organic hazardous air pollutants from its existing wood-fired green furnish predryer. This RTO would be installed on the outlet of the existing WESP and would be fueled by natural gas. In addition, de minimis changes that had occurred at Roseburg's facility since the issuance of the previous permit were incorporated. These changes included the construction of a melamine application line. New equipment associated with this melamine line included a conveyor line, a hot press, a natural gas-fired burner, and a baghouse. **MAQP #2303-14** replaced MAQP #2303-13.

On September 16, 2008, the Department received a complete application from Roseburg requesting that the Department modify MAQP #2303-14. In order to comply with the Plywood and Composite Wood Product Maximum Achievable Control Technology (MACT) rule, Roseburg installed a regenerative thermal oxidizer (RTO) to control emissions of volatile organic hazardous air pollutants (VHAP) from its existing wood-fired green furnish predryer. This RTO was installed on the outlet of the existing wet electrostatic precipitator and is fueled by natural gas. The installation of the RTO was permitted under MAQP #2303-14, which included a provision limiting the particulate matter emitted from the RTO to 0.10 grains per dry standard cubic foot (gr/dscf) corrected to 12% carbon dioxide (CO<sub>2</sub>) and calculated as if no auxiliary fuel had been used. This limit is a Best Available Control Technology (BACT)-derived limit intended to be consistent with ARM 17.8.316. However, since the issuance of MAQP #2303-14, Roseburg has discovered that the RTO is not capable of achieving this BACT-derived limit. Therefore, Roseburg proposes to modify the particulate BACT limit for the RTO in this permit action. The Department has updated the permit based on the revised BACT analysis.

In addition, several de minimis changes have occurred at this facility since the last permit action. These de minimis changes include: the replacement of two saws (the Jenkins 5x16 production saw and the old, existing Giben saw) with a 1991 Giben 12' Angular Panel saw, the installation of a biofilter on the particleboard presses to comply with the Plywood and Composite Wood Product MACT rule, and the installation of an edge banding line in the Remanufacturing (Reman) area of the facility. The edge banding line consists of an edge bander with a capacity of 60.4 million lineal feet per year that utilizes an adhesive product to bind tape to the edge of the particleboard. The emissions change associated with each of these projects are below the de minimis level of 15 tons per year, as specified in ARM 17.8.745. Therefore, an MAQP was not required. The Department has updated this permit, however, to reflect these de minimis changes. **MAQP #2303-15** replaced MAQP #2303-14.

On March 30, 2012, Roseburg submitted a permit application for a modification of MAQP #2303-15 and a renewal application for the Title V Operating Permit (OP) #2303-06. The MAQP application was deemed complete on April 16, 2012. In addition to this application, this permit action incorporates several de minimis requests previously approved by the Department as discussed below.

On May 1, 2009, the Department approved a de minimis change to allow Roseburg to utilize 14 MMBtu/hr of land fill gas (LFG) from Allied Waste. Roseburg proposed to burn this fuel in the Sander Dust Boiler and possibly the Solagen Sander Dust Boiler.

On February 6, 2012, Roseburg submitted a de minimis request to repurpose the Six-Head Sander Baghouses (BH 300 A & B) to collect dust from the Line 1 Blending and Forming area, and the Line 1 M & D shaker screens and dryer conveyor area. On February 8, 2012, the Department determined the request did not meet the requirements of the de minimis rule pursuant to ARM 17.8.745.

In addition to those items listed above, Roseburg's permit application requested the Department: (1) remove Line 2 and all associated equipment (including the GEKA 200 Burner) from the MAQP and OP; (2) remove Dryer stacks #5 and #6 because these are no longer used; (3) change the baghouse references in Section I.H.1 to Roseburg's naming convention and numbering system; (4) remove the cyclone requirement from the predryer because the cyclone is used as product recovery rather than control; (5) add the regenerative thermal oxidizer (RTO) in addition to the wet electrostatic precipitator (WESP) as control for the predryer because all the exhaust gases are routed here; (6) change the reference from the wood particle dryer to the wood particle rotary dryer; (7) remove a portion of the remanufacturing process; (8) change the temperature requirement on the dryer alarm system from 1100 degrees Fahrenheit (°F) to 600 °F to coincide with 40 Code of Federal Regulations (CFR) 63, Subpart DDDD; and (9) change the testing requirement on the Solagen Burner from 2-year testing to a 5-year testing requirement.



Additionally, Roseburg requested that the Department change referral of the ‘dryer stacks’ to the ‘Line 1 Dryer stack’. Both permits list six (6) dryers and Roseburg requested the Department remove the #5 and #6 dryers. Also because the dryers are all now routed to common stack (Line 1 dryer stack), Roseburg requested a combined emission limit of 19.4 pounds per hour for all the dryers. **MAQP #2303-16** replaced MAQP #2303-15.

On June 18, 2012, the Department received a request to amend MAQP #2303-16 to clarify some items in the permit. Specifically, Roseburg requested an administrative amendment to change Section II.E.5 from “Roseburg shall install and operate temperature sensors at the inlet of each wood particle rotary dryer” to “Roseburg shall install and operate temperature sensors at the inlet of each wood particle dry rotary dryer (final dryers).” Additionally, in MAQP #2303-16 the Department previously listed one of the changes to the permit as: “change the reference from the wood particle dryer to the wood particle rotary dryer,” and Roseburg thought it would be more accurate if the reference to “Wood Particle Dryers (Dryers 1, 2, 3, and 4)” in Section II.E. changed to “final dryers.” **MAQP #2303-17** replaced MAQP #2303-16.

#### Title V Operating Permit History

On July 26, 2002, Title V **Operating Permit #OP2303-00** was issued to LP. The permit included all applicable conditions under Title V of the Federal Clean Air Act. On February 21, 2003, LP and Roseburg submitted a request to transfer the permit for the facility from LP to Roseburg. In addition, on March 20, 2003, Roseburg submitted a request to update the Responsible Official of the facility. The permit action was an administrative amendment to make the changes and to update rule citations in the permit. Appendix A (Rule Citations) was removed from the permit because it no longer applies. **Operating Permit #OP2303-01** replaced Operating Permit #OP2303-00.

On July 17, 2003, the Department received a letter from Roseburg indicating various typographical errors and permit condition discrepancies contained in Title V Operating Permit #OP2303-01. In addition, since Roseburg was identified as being subject to 40 CFR 63, Subpart JJ, National Emissions Standards for Wood Furniture Manufacturing Operations, the Department determined that it was appropriate to include these requirements under the Remanufacturing Facility portion of the operating permit. The permit action modified the Remanufacturing Facility section of the permit, to include applicable 40 CFR 63, Subpart JJ requirements and modified various typographical errors and permit condition discrepancies indicated in the letter received by the Department on July 17, 2003. **Operating Permit #OP2303-02** replaced Operating Permit #OP2303-01.

On January 8, 2007, the Department received a Title V Operating Permit Renewal Application from Roseburg. On March 9, 2007, the Department received additional information that the Department requested regarding the application. Specific changes that were made to the permit during the permit renewal, excluding routine changes such as updating permit language, rule references, and compliance demonstrations, include the following:

- Appendix E, Ambient Air Quality Monitoring was removed from the permit as requested by Roseburg on July 17, 2003, and approved by the Department on July 31, 2003;
- The permit action from MAQP application #2903-12 was included in the permit: Remove EU009, #2 predryer (DRY 501); Remove EU034, COEN Burner (COEN); and Add EU046, predryer storage silo (BH 60), EU047 Solagen Burner (SOLAGEN), and associated requirements from MAQP;
- The permit action from MAQP #2303-14 was included in the permit: Add EU055, Melamine Baghouse (BH 500) and Add EU056, Regenerative Thermal Oxidizer (RTO)), and associated requirements from MAQP;

- EU020 and EU021, six head sander system (BH 300 A and BH 300 B) were combined as EU020, six head sander system (BH 300 A & B);
- EU024 and EU025, eight head sander system (BH 302 and BH 303) were combined as EU024, eight head sander system (BH 302 & 303);
- EU048, Line 1 Board Cooler Vents 1, 2, and 3 and EU049, Line 2 Board Cooler Vents 1 and 2 were added to the permit for completeness;
- EU039, Remanufacturing facility (REMAN) was separated out into individual emitting units as EU050, Bullnose Fugitives (FUG 400), EU051 Paintline Fugitives (FUG 401), EU052, Paint Drying Oven #1 (S400), EU053, Paint Drying Oven #2 (S401), and EU054, Paint Drying Oven #3 (S402);
- EU040 through EU043, #1 through #4 dryer line 1 natural gas burners (DRY-NG 100 through DRY-NG 103) were included with the Line 1 dryers in Section III.C. of the permit;
- EU044 and EU043, #5 and #6 dryer line 2 natural gas burners (DRY-NG 200 and DRY-NG 201) were included with the Line 2 dryers in Section III.D of the permit;
- IEU028, Melamine Press Vents (FUG) and IEU029, Melamine Burner (INTEC) which were approved by the Department on March 14, 2005 as a de minimis change according to the provisions of ARM 17.8.745, were added to the insignificant list because the combined potential to emit (PTE) of the two units is less than significant levels as clarified by Roseburg in a letter dated January 13, 2006;
- Appendix F, Routine Control Device Maintenance Exemption was added to the permit as required in 40 CFR 63.2251; and
- A condition was included in Section III.B – Plant - Wide to identify that the facility is subject to 40 CFR 63, Subpart DDDD National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products.

**Operating Permit #OP2303-03** replaced Operating Permit #OP2303-02.

On September 15, 2008, the Department received a Title V Operating Permit Significant Modification application from Roseburg, with a follow-up letter that was received October 3, 2008. In order to comply with the Plywood and Composite Wood Product MACT rule, Roseburg installed an RTO to control emissions of VHAP from its existing wood-fired green furnish predryer. This RTO was installed on the outlet of the existing wet electrostatic precipitator and is fueled by natural gas. The installation of the RTO was permitted under MAQP #2303-14, which included a provision limiting the particulate matter emitted from the RTO to 0.10 gr/dscf corrected to 12% CO<sub>2</sub> and calculated as if no auxiliary fuel had been used. Under MAQP #2303-15, this BACT-derived limit was modified. Under this significant modification, this modified particulate matter limit has been incorporated into Roseburg's Title V Operating Permit. Additionally, clarifications to 40 CFR 63, Subpart DDDD conditions were added to the permit. **Operating Permit #OP2303-04** replaced Operating Permit #OP2303-03.

On September 2, 2010, the Department received an administrative amendment request from Roseburg requesting a change of Responsible Official from Ken Cole to Chuck Ulik. **Operating Permit #OP2303-05** replaced Operating Permit #OP2303-04.

On July 22, 2011, the Department received an administrative amendment request from Roseburg requesting to add Grady Mulbery as a Responsible Official. The Department received a second administrative amendment request on August 8, 2011 to also add Mark Allen as a Responsible Official in addition to Chuck Ulik and Grady Mulbery. **Operating Permit #OP2303-06** replaced Operating Permit #OP2303-05.

#### D. Current Permit Action

On March 30, 2012, Roseburg submitted a concurrent permit application for a modification of MAQP #2303-15 and a renewal application for the Title V Operating Permit (OP) #2303-06. The MAQP and OP application was deemed complete on April 16, 2012. After the completeness date, the Department requested additional information regarding the CAM plan and Roseburg responded on June 21, 2012, **Operating Permit #OP2303-07** replaces Operating Permit #OP2303-06.

#### E. Taking and Damaging Analysis

HB 311, the Montana Private Property Assessment Act, requires analysis of every proposed state agency administrative rule, policy, permit condition or permit denial, pertaining to an environmental matter, to determine whether the state action constitutes a taking or damaging of private real property that requires compensation under the Montana or U.S. Constitution. As part of issuing an operating permit, the Department is required to complete a Taking and Damaging Checklist. As required by 2-10-101 through 2-10-105, MCA, the Department conducted a private property taking and damaging assessment and has determined there are not taking or damaging implications.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

## **F. Compliance Designation**

The Roseburg facility was last inspected on August 11, 2011. The Department completed a full compliance evaluation as part of completing the August 11, 2011 inspection report.

In February of 2011 Roseburg self-disclosed numerous violations of the Clean Air Act of Montana at Roseburg's Missoula Plant by submitting revised Operating Permit and MACT Program reports to the Department that covered five years of erroneous reporting. The revised reports identified numerous permit violations that had not been previously reported to the Department that included: improperly certifying the company was in compliance with numerous provisions in the company's air quality permits; failing to inspect and calibrate equipment; failing to complete startup, shutdown or malfunction checklists; failing to maintain required records; filling gasoline tanks without vapor loss control equipment; and storing sander dust outside.

The Department issued a violation letter to Roseburg on June 20, 2011. Subsequent to the issuance of the violation letter, Roseburg submitted additional sets of revisions of the Operating Permit and MACT reports to the Department. The Department assessed Roseburg a \$130,925 penalty regarding the violations.

Roseburg agreed to fund a \$130,925 Supplemental Environmental Project in lieu of paying the penalty directly to the Department. In April of 2013 Roseburg paid \$130,925 to the Missoula County Seeley Lake Wood Stove Change-Out Program. The Wood Stove Program helps residents buy and install new EPA-certified pellet and wood burning stoves to reduce air pollution that has a negative effect impact on public health.

The Department considers the Roseburg violation resolved and the enforcement case is closed.

## SECTION II. SUMMARY OF EMISSION UNITS

### A. Facility Process Description

This plant processes raw wood fiber into particle board by refining the fiber, adding resin, and pressing the mat into boards. The raw material, primarily wood shavings from the planing process in sawmills, is transported to Missoula by truck. This material is unloaded at the plant and moved by conveyor to the dryers and the press line, or out to the storage pile. The material is retrieved from the pile by front-end loader and conveyed to the dryers and the press line. Approximately 50% of the plant production is stored in this pile during the year. The wood fiber is then dried, blended with a resin, and introduced to the press line for particle board production. Many baghouses and cyclones are used in the wood fiber handling systems. Sawdust and sander dust is used as fuel for the boiler and the sander dust burners. This plant also contains a remanufacturing (reman) section, which processes the particle board into finished wood that is used in furniture production. The reman section includes an edge banding line that utilizes an adhesive product to bind tape to the edge of the particleboard. In addition, this facility applies melamine to its manufactured particleboard. Melamine application involves placing a sheet of melamine paper on the top and bottom surfaces of a particleboard mat and pressing the paper and particleboard in a hot press. The melamine paper that overhangs the particleboard is then trimmed with a saw.

### B. Emission Units and Pollution Control Device Identification

The Roseburg Particleboard Plant includes the following process and control equipment.

1. Line 1 Dryers (DRY 100, DRY 101, DRY 102, and DRY 103)

Four direct-contact wood particle dryers with multiclone control (DRY 100, DRY 101, DRY 102, and DRY 103). The dryers draw hot combustion gases from the Roemmc burner (ROEMMC) tube to dry particleboard furnish. The combustion gases come from combustion of sander dust and/or a small amount of natural gas in the Boiler (BOILER 1) and the Roemmc burner (ROEMMC). There is an ID fan on the outlet side of the dryer which draws the combustion gas, furnish, and cool makeup air through the dryer. The ID fan exhausts through a multiclone which collects the dried furnish and acts as particulate control. Exhaust gases from each Line 1 dryer exit a common vertical stack. Each dryer is equipped with a natural gas burner which is used if hot gas from the Roemmc burner is not available. Each of the dryers has a rated capacity of 20,000 pounds per hour (lb/hr) of wet wood (annual average hourly rate). The natural gas back-up burners for DRY100 and DRY102 have capacities of 28 MMBtu/hr and the natural gas back-up burners for DRY103 and DRY104 have capacities of 22 MMBtu/hr.

2. #1 Predryer (DRY 500)

A direct-contact predryer (DRY 500) with a WESP and RTO control. The predryer draws hot combustion gases from the Solagen tube to dry particleboard furnish. The combustion gases come from combustion of sander dust and/or a small amount of natural gas in the Solagen burner (SOLAGEN). There is an ID fan on the outlet side of the dryer which draws the combustion gas, furnish and cool makeup air through the dryer. The ID fan exhausts through a medium efficiency cyclone, which collects the dried furnish and then through a WESP, which acts as particulate control, and then through a RTO to control volatile organic hazardous air pollutants. The predryer is equipped with low NO<sub>x</sub> burners and is configured so that approximately 50% of its exhaust gas will be reintroduced into the duct immediately preceding the predryer drum. The predryer has a rated capacity of 46,000 bone dry pound per hour (BDP/hr) of wet wood. The Solagen burner has a rated capacity of 45 MMBtu/hr.

3. Outside Truck Dump (BH 50)

Outside Truck Dump (BH 50) represents the unloading of trucks at the outside truck dump. Product is trucked in and unloaded onto conveyors with a hydraulic truck dump. Emissions from product unloading are collected with an aspiration system connected to a baghouse (BH 50). Material collected by the baghouse is transferred to the covered storage area.

4. Milling and Drying (BH 55)

Milling and Drying (BH 55) represents the refining and material transfer from the refiners to the Line 1 dryers. The material is refined and conveyed pneumatically to the dryers. Excess air flow from the system is diverted to the M&D baghouse (BH 55). Material collected by the baghouse is transferred to the sander dust storage bin for the Roemmc burner.

5. Predry (BH 60)

Predry (BH 60) represents the green sawdust that has been dried by the predryer (DRY 500). Dried green sawdust is conveyed into a storage silo, which is controlled by BH 60 with a capacity to hold 80 cubic feet (ft<sup>3</sup>) and metered into the material mix just prior to the final dryers. Material collected in the baghouse is blown into the storage silo.

6. Reject System Line 1 (BH 100)

Reject System Line 1 (BH 100) represents the aspiration and reject system on Line 1. Material is collected along a series of aspiration points throughout the forming and storage bin areas. Two small cyclones collect any potential fugitive dust at the forming bin and face and core bins. The collected product from the cyclones is deposited on the forming line and exhaust is routed to BH 100. Side trim, material collected in the press pit and any mat reject is augured to another collection cyclone and deposited back into the system. Exhaust from the cyclone is also collected by BH 100.

7. Reject Receiver (BH 100R)

BH 100R (formerly designated as Reject System Relay (BH 101)) represents the relay baghouse for BH 100. All collected material from the Reject System on Line 1 is pneumatically transferred to BH100R. Collected material is stored in covered storage and recycled through the particle board process.

8. 5 X 25 Board Trimsaws System (BH 102 A)

5 X 25 Board Trimsaws System (BH 102 A) represents Line 1, 5 X 25 particleboard trim and sizing. After being processed and cooled, the particleboard is trimmed to marketable dimensions. The end trim is hogged and pneumatically transferred to one of the two baghouses. Sawdust that is generated is also collected and transferred to the baghouses. Material collected by the baghouses is pneumatically transferred to the covered storage area. Exhaust from the system vents through BH 102 A.

9. 5 X 16 Board Trimsaws System (BH 102 B)

5 X 16 Board Trimsaws System (formerly designated as BH 103) represents Line 1, 5 X 16 particleboard trim and sizing. After being processed and cooled, the particleboard is trimmed to marketable dimensions. The end trim is hogged and pneumatically transferred to one of the two baghouses. Sawdust that is generated is also collected and transferred to the baghouses. Material collected by the baghouses is pneumatically transferred to the covered storage area. Exhaust from the system vents through BH 102B.

10. Forming and M & D Cleanup (BH 101 A & B)

With the cessation of Line 2, Roseburg repurposed the six head sander baghouses (formerly BH 300 A and BH 300B) to be used on the Line 1 Forming and M & D Cleanup and renamed them BH 101 A & B.

11. Forming and M & D Cleanup Receiver (BH 101R)

With the conversion of the Six Head Sander to the Forming and M & D Cleanup, the Six Head Sander and Reman Flatline System Relay (BH 301) no longer facilitates transfer of sanderdust to the Roemmc and Boiler dust bins. However, it will now transfer material collected from the Form Station and M & D Cleanup Baghouse to the Roemmc and Boiler Dust Bins.

12. Eight Head Sander (BH 302 A & B)

BH 302 A & B (formerly designated BH302 and BH 303) each represents one of two aspiration systems on the eight head sander. A percentage of the particleboard manufactured is finish sanded for market. The board is top and bottom sanded and all sanderdust is collected by a series of pickup points along the process. Collected material is pneumatically transferred to one of two baghouses. Material collected in the baghouses is pneumatically transferred to a relay system baghouse (BH 304) located by the sanderdust storage bin.

13. Eight Head Sander System Relay (BH 302R)

Eight Head Sander System Relay (formerly BH 304) represents the relay for baghouses BH 302 A & B. All collected materials from BH 302 A & B are pneumatically transferred to BH 302R. Collected material is augured into one of two sanderdust storage bins.

14. Schilling and Bullnose Saw System (BH 401)

Schilling and Bullnose Saw System (BH 401) represents the aspiration system on the Reman finishing system (Particleboard going through the reman process after being coated and cut to length by the schilling saw) and the edge bander line. Sawdust from the process is pneumatically conveyed to BH 401. After the schilling saw, the product is conveyed through the bullnose system. The bullnose rounds one edge of the board. All material from the router is pneumatically collected and transferred to a relay system (BH 404) located by the covered storage area.

15. Schilling and Bullnose System Relay & Edge Bander Line (BH 401R)

Schilling and Bullnose saw system Relay (formerly BH 404) represents the relay for BH 401. All collected materials from BH 401 are pneumatically transferred to BH 401R. Collected material is conveyed into the covered storage building.

16. Melamine Baghouse (BH 500)

The Melamine Baghouse (BH 500) represents the dust and melamine trip collection air system. Resin dust from the back side of the melamine paper, along with wood dust left over from sanding is collected in the process before the press. After the press, excess melamine trim is collected in the Melamine Baghouse. From there the dust and melamine trim passes through an airlock into a collection hopper. When the hopper is full, it is taken to a landfill and dumped.

17. Press Vents 1, 2, 3, and 4 Line 1 (PRESS 100)

Press Vents 1, 2, 3, and 4 Line 1 (PRESS 100) represents the four exhaust vents above the particleboard batch press on Line 1. The press is heated by steam from the boiler (Boiler #1). After the mat is formed and trimmed, it is conveyed to the press loader. The mats are loaded and pressed. Heat, steam, and gases from the press are drawn to a biofilter by the three powered press vents above the process. There is a pre-press vent before the four press exhaust vents that stack testing has shown draws air in and does not exhaust to the atmosphere.

18. Line 1 Board Cooler Vents 1, 2, and 3

Line 1 Board Cooler Vents 1, 2, and 3 represent three board cooling chambers. After exiting the hot press, board panels need to be cooled before being stacked for extended periods. This process is done in the board cooling chambers. Outside ambient air from above the building roof is forced down into each cooling chamber with two large fans in the ducts. As the board panel enters the chambers it is tipped on edge with forks with approximately six inches between each panel. The board panels move slowly through the chambers with cool air passing between the panels. The chambers are designed so that cool air flows from right to left. In the second part of the chambers, the air flow is reversed. There are two large ducts with fans that exhaust through the roof of the building. Above the roof, there are smaller ducts connecting the infeed and exhaust ducts. During the winter months, infeed air is mixed with exhaust to a desired temperature for cooling the panels. Too much cold air will warp thin panels, causing problems when sawing.

19. Boiler #1 (BOILER 1)

Boiler #1 (BOILER 1) represents a 55 MMBtu/hr sanderdust and/or natural gas fired boiler that supplies steam to the hydraulic press on Line 1 (PRESS 100). Steam from the boiler is also used as building heat. In normal operation, the boiler exhaust gas vents into the ROEMMC tube, which supplies heat to the six dryers. In this situation, emissions from the boiler vent to atmosphere either through the six dryers and dryer pollution control equipment or through the ROEMMC stack. The boiler also has an abort stack to divert hot gases directly to the atmosphere in case of fire or other problems. Opacity is measured in the ash separator by an audible monitor that sounds when opacity exceeds 20%. The opacity monitor is used as a process tool as described in MAQP #2303-13.

20. Roemmc Burner (ROEMMC)

Roemmc Burner (ROEMMC) represents a 50 MMBtu/hr sanderdust and/or natural gas burner that supplies heat to the six wood particle dryers. The Roemmc burner exhaust gas vents into a heating duct called the Roemmc tube which feeds heat to the dryers. The exhaust gas may also vent directly into the atmosphere through the Roemmc burner stack. The combustion rate of the burner may be varied depending on the amount of heat needed to dry the furnish. This, in turn, is dependent on season, throughput, and moisture content of the furnish.

21. Solagen Burner (SOLAGEN)

Solagen Burner (SOLAGEN) represents the sander dust or natural gas-fired burner primarily intended to heat the wood particle predryer. The Solagen burner utilizes a minor amount of exhaust gases from the predryer in order to reduce NOx emissions. All exhaust gases from the Solagen burner are ducted through the predryer. The Solagen burner has a maximum rated design capacity of 45 MMBtu/hr.



22. Regenerative Thermal Oxidizer (RTO)

The RTO (and WESP) controls volatile organic hazardous air pollutant emissions from the predryer. The RTO runs on natural gas and has a burner capacity of 8 MMBtu/hr.

23. Outside Truck Dump (FUG 50)

Outside Truck Dump (FUG 50) represents the unloading of trucks at the outside truck dump. Product is trucked in and unloaded onto conveyers with a hydraulic truck dump. The truck dump is partially covered (only part of the trailer and the cab are exposed). Fugitive emissions from product unloading are collected with an aspiration system connected to a baghouse (BH 50). Unloaded product is conveyed to either inside storage, outside storage, or directly to the pre-dry chip bins.

24. Pile Reclaim Fugitives (FUG 51)

Pile Reclaim Fugitives (FUG 51) represents the loading of products from outside storage into the reclaim system. Product is transferred from the reclaim system to the drying systems of Line 1 and Line 2.

25. Radial Stacker (FUG 52)

Radial Stacker (FUG 52) represents the loading of product from inside storage onto the outside storage pile. The stacker is adjustable and mobile to vary the size and placement of the product pile.

### C. Categorically Insignificant Sources/Activities

The Administrative Rules of Montana (ARM) 17.8.1201(22)(a) defines an insignificant emission unit as one that emits less than 5 TPY of any regulated pollutant, has the potential to emit less than 500 pounds per year of lead or any hazardous air pollutant, and is not regulated by any applicable requirement other than a generally applicable requirement. The following table contains the insignificant emitting units at the Roseburg facility:

Emissions Unit ID	Description
IEU01	Auxiliary Diesel Generators (I2)
IEU02	Degreasing (I7)
IEU03	Portable Heaters (I9)
IEU04	Wax Pump (I15)
IEU05	Gas Powered Sump Pump (I2)
IEU06	Fire Pond Dredging (I120)
IEU07	Diesel Tank (I23)
IEU08	Gasoline Storage Tank (I22)
IEU09	2 Wax Tanks (I22)
IEU10	10 Resin Tanks (I22)
IEU11	1 Day Use Wax Tank (I22)
IEU12	Propane Storage Tanks (I25, I31)
IEU13	General Repair and Maintenance (I34)
IEU14	Machining – General Maintenance (I36)
IEU15	2-52 Gallon Brine Tanks (I33)
IEU16	Septic System with Lift System (I40)
IEU17	Space Heaters (I43)
IEU18	Steam Cleaning – General Maintenance (I45)
IEU19	Knife Sharpening Solution (I46)
IEU20	Degreasing (I7)
IEU21	Non Processing Heaters (NPHEAT)

IEU22	Wax Pump (I15)
IEU23	Gas Powered Sump Pump (I2)
IEU24	Fire Pond Dredging (I120)
IEU25	Diesel Tank (I23)
IEU26	Gasoline Storage Tank (I22)
IEU27	Melamine Press Vents (FUG)
IEU28	Melamine Burner (INTEC)

## SECTION III. PERMIT CONDITIONS

### A. Emission Limits and Standards

#### 1. Facility Wide

The facility wide emission limits include limitations on visible air contaminants, airborne PM, PM from fuel-burning equipment, PM from industrial processes, sulfur oxide emissions from sulfur in fuel (liquid, solid, and gaseous), operations during emergency episodes, and various reporting and recordkeeping requirements. These emission limits are applicable to the facility and/or to specific emission units located at the facility.

Roseburg's visible air contaminants are limited to less than 40% opacity averaged over 6 consecutive minutes for all sources installed on or before November 23, 1968, unless otherwise specified by rule or in this permit. Furthermore, Roseburg's visible air contaminants from all sources installed after November 23, 1968, are limited to less than 20% opacity averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.

Roseburg must take reasonable precautions to minimize airborne PM prior to producing, handling, transporting, or storing any material. Furthermore, Roseburg shall not use any street, road, or parking lot, or operate any construction site or demolition project unless reasonable precautions are taken to control emissions of airborne PM. Such emissions of airborne PM are limited to less than 20% opacity averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.

Roseburg is limited on the emissions of PM from the combustion of fuel. The applicable limitation is based on the installation date of the combustion device and the heat input capacity of the device.

Roseburg is limited on the amount of PM that can be discharged from any operation, process, or activity into the outdoor atmosphere. The appropriate emission limit is based on the process weight rate of the respective emitting unit. Certain units within the Roseburg facility contain more stringent emission limits than the limits that would apply based on the process weight rate. For those units, the process weight rate limitation was not included as an applicable requirement because the existing condition was more stringent.

The Roseburg facility is also limited on the sulfur oxide emissions that are allowed from the facility. Roseburg is not allowed to burn any liquid or solid fuels containing sulfur in excess of 1 pound of sulfur per MMBtu fired. In addition, Roseburg may not burn any gaseous fuels containing sulfur in excess of 50 grains per 100 ft<sup>3</sup> of gaseous fuel.

The Roseburg facility is subject to the emergency episode plan requirements contained in Chapter 4 of the Missoula City-County Air Pollution Control Program (Chapter 32 of the State of Montana Air Quality Control Implementation Plan). Each stationary source within Missoula County that emits or is capable of emitting 25 TPY or more of PM<sub>10</sub>, SO<sub>2</sub>, CO, O<sub>3</sub>, or NO<sub>2</sub> must have an abatement plan for reducing emissions of such pollutants during an air pollutant emergency episode. The plan, which is subject to review and approval by the Missoula City-County Health Department, must sufficiently demonstrate the ability of the source to reduce emissions as required under each stage of the emergency episode avoidance plan. The Missoula City-County Health Department may require sources to periodically review and update their abatement plans and submit them to Missoula City-County Health for review and approval.

## 2. Plant Wide

In addition to those limits previously identified as “facility-wide” emission limits, the following emission limits apply “plant-wide” at the Roseburg facility. Similar to the facility wide limitations, the plant wide emissions are limited to less than 20% opacity from all sources installed after November 23, 1968.

Operation of Line 1 is limited to 8,500 hours during any rolling 12-month period.

Paving or a dust suppressant is required on all routinely used haul roads to minimize fugitive emissions. The opacity from the haul roads shall not exceed 20%.

Roseburg is not allowed to store any contaminated floor sweepings outdoors. This requirement is intended to reduce the possibility of the material becoming airborne. Currently, Roseburg is limited to storing no more than 50 units (370 yd<sup>3</sup>) of contaminated floor sweepings in the contaminated floor sweepings building.

Roseburg is required to plant and maintain vegetation on the earthen berm to minimize emissions from the raw material storage pile.

Total particulate emissions from the raw material storage pile are limited to 928 pounds per day and 30 TPY. PM<sub>10</sub> emissions from the raw material storage pile are limited to 334 pounds per day and 9.9 TPY.

## 3. Dryers (DRY 100, DRY 101, DRY 102, DRY 103)

Emissions from the dryers at the Roseburg facility are limited to less than 20% opacity averaged over 6 consecutive minutes. The total PM and PM<sub>10</sub> emissions from each dryer are also limited. Roseburg is required to operate and maintain multiclones as part of the effort of complying with the total PM and PM<sub>10</sub> emission limits. Furthermore, Roseburg is required to install and operate temperature sensors with remote readout and audible alarm on the inlet of all dryers. The alarm system shall become activated when the exhaust gas exceeds 475°F.

## 4. Predryer (DRY 500)

Similar to the dryers, the predryer at the Roseburg facility is limited to less than 20% opacity averaged over 6 consecutive minutes. The predryer is also limited in total PM and PM<sub>10</sub> emissions. Roseburg is required to operate and maintain a WESP and RTO as part of the effort of complying with the total PM and PM<sub>10</sub> emission limits. Furthermore, Roseburg is required to install and operate temperature sensors with remote readout and audible alarm on the inlet of the predryer. The alarm system shall become activated when the dryer inlet temperature exceeds 475 °F. In addition, the production from the predryer is limited to 200,000 BDT per rolling 12-month period.

## 5. Baghouses (BH 50, BH 55, BH 60, BH 100, BH 100R, BH 101A, BH 101B, BH 101R, BH 102A, BH 102B, BH 302A, BH 302B, BH 302R, BH 401, BH 401R, BH 500)

The baghouses at the Roseburg facility are limited to less than 20% opacity averaged over 6 consecutive minutes. Each baghouse is limited in total PM emissions, PM<sub>10</sub> emissions, and flow rate. The particulate limits range from grain-loading limits to the limits that were established in previous MAQPs. The flow-rate limits have been incorporated from the MAQP.

For those baghouses in the Title V permit that already contain a more stringent particulate limit, the limits established through the process weight rule were removed from the permit. When compared to the emission limits currently established for the baghouses, the regulatory limit established through the process weight rule is less stringent.

6. Press Vents (Press Vents 1, 2, 3, and 4 on Line 1)

The emissions from each of the press vents are limited to less than 20% opacity averaged over 6 consecutive minutes. The total PM and PM<sub>10</sub> emissions from each of the press vents are also limited. The total PM and PM<sub>10</sub> limits will require Roseburg to stay below 8.0 lb/hr for Line 1. The PM limit that would result from the process weight rule would be less stringent than the limit that is currently contained in the MAQP (and the Title V permit). For this reason, the PM limit that would be based on the process weight rule was removed from this section of the Title V permit. Also, the biofilter routine control device maintenance exemption is limited to a maximum of 0.5% of the press annual operating uptime on both Line 1.

7. Board Cooler Vents (Line 1 Board Cooler Vents 1, 2, and 3)

The Board cooler vents are limited to less than 20% opacity averaged over 6 consecutive minutes and total particulate is limited based on the process weight rule.

8. Boiler #1 (BOILER 1)

The emissions from Boiler #1 are limited to less than 20% opacity averaged over 6 consecutive minutes. Furthermore, particulate from fuel combustion, total PM, and PM<sub>10</sub> emissions are also limited. The particulate from fuel combustion is limited to a pound per MMBtu value that is determined by using the heat-input capacity of the boiler. Both the total PM and PM<sub>10</sub> limits are 19.8 lb/hr of operation. The PM limit that would result from ARM 17.8.309 would be 22.18 lb/hr and would be less stringent than the limit that is currently contained in the MAQP (and the Title V permit). For this reason, the PM limit that would be based on ARM 17.8.309 was removed from this section of the Title V permit.

9. Roemmc Burner (ROEMMC)

Limitations have been placed on the Roemmc Burner for opacity, particulate from fuel combustion, sander dust combustion, NO<sub>x</sub> emissions, CO emissions, and VOC emissions. The Roemmc Burner shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes. The particulate from fuel combustion is limited to a pound-per-MMBtu value that is determined by using the heat-input capacity of the burner. The Roemmc Burner is limited to combusting 23,000 tons or less of sander dust per rolling 12-month period. Emissions of NO<sub>x</sub>, CO, and VOC from the Roemmc Burner shall not exceed 115.0 lb/hr, 100.0 lb/hr, and 0.35 lb/hr, respectively. The Roemmc Burner is potentially required to have an opacity monitor. Roseburg is required to install and operate an opacity monitor on the burner exhaust, as required by the Department.

10. Solagen Burner (SOLAGEN)

Limitations have been placed on the Solagen Burner for opacity, particulate from fuel combustion, sander dust combustion, natural gas combustion, NO<sub>x</sub> emissions, CO emissions, and VOC emissions. The Solagen Burner shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes. The particulate from fuel combustion is limited to a pound-per-MMBtu value that is determined by using the heat-input capacity of the burner. The Solagen Burner is limited to combusting 23,000 tons or less of sander dust per rolling 12-month period

and 352.1 MMScf or less of natural gas per rolling 12-month period. Emissions of NO<sub>x</sub>, CO, and VOC from the Solagen Burner shall not exceed 31.5 lb/hr, 15.6 lb/hr, and 0.09 lb/hr, respectively. The Solagen Burner is potentially required to have an opacity monitor. Roseburg is required to install and operate an opacity monitor on the burner exhaust, as required by the Department.

#### 11. Regenerative Thermal Oxidizer (RTO)

Limitations have been placed on the RTO for opacity, particulate from fuel combustion, and the potential requirement to install and operate an opacity monitor. Emissions from the RTO shall not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes. The particulate from fuel combustion for the RTO is limited to 0.10 gr/dscf. Roseburg is required to install, operate, and maintain the RTO to control volatile hazardous air pollutants from the wood-fired green furnish predryer and must notify the Department of actual start-up of the RTO within 15 working days. Roseburg's Routine Control Device Maintenance Exemption is limited to 3% of the green dryer annual operating uptime. The RTO is potentially required to have an opacity monitor. Roseburg is required to install and operate an opacity monitor on the RTO, as required by the Department.

#### 12. Fugitives (FUG 50, FUG 51, FUG 52)

The fugitive emissions from FUG 50, FUG 51, and FUG 52 are limited to less than 20% opacity averaged over 6 consecutive minutes.

### B. Monitoring Requirements

ARM 17.8.1212(1) requires that all monitoring and analysis procedures or test methods required under applicable requirements are contained in operating permits. In addition, when the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit.

The requirements for testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance do not require the permit to impose the same level of rigor for all emission units. Furthermore, they do not require extensive testing or monitoring to assure compliance with the applicable requirements for emission units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. When compliance with the underlying applicable requirement for a insignificant emissions unit is not threatened by lack of regular monitoring and when periodic testing or monitoring is not otherwise required by the applicable requirement, the status quo (**i.e., no monitoring**) will meet the requirements of ARM 17.8.1212(1). Therefore, the permit does not include monitoring for insignificant emission units.

The permit includes periodic monitoring or recordkeeping for each applicable requirement. The information obtained from the monitoring and recordkeeping will be used by the permittee to periodically certify compliance with the emission limits and standards. However, the Department may request additional testing to determine compliance with the emission limits and standards.

### C. Test Methods and Procedures

The operating permit may not require testing for all sources if routine monitoring is used to determine compliance, but the Department has the authority to require testing if deemed necessary to determine compliance with an emission limit or standard. In addition, the permittee may elect to voluntarily conduct compliance testing to confirm its compliance status.

Various test methods and procedures have been incorporated into this permit to assist in determining compliance with applicable limitations. Numerous limitations within the permit identify a routine time frame for conducting emission tests (e.g. every 5 years or as required by the Department). In either case, the testing that is conducted or that may be conducted must be done in accordance with the Montana Source Test Protocol and Procedures Manual. The Montana Source Test Protocol and Procedures Manual requires that process rates during testing must be at specific conditions that are representative of maximum operating capacity or maximum permitted capacity unless otherwise agreed upon by the Department and the source. Furthermore, the Department has the authority to require additional source testing (for example, more often than every 5 years) if necessary in accordance with ARM 17.8.105. A summary of test methods and procedures for each of the emitting units follows:

1. Facility Wide

The facility wide emission limits are intended to identify conditions that are generally applicable to the facility. The section labeled “Facility Wide” Emission Limits does not include the method of compliance monitoring or the frequency. Each of the limitations that are applicable to a specific emitting unit is identified with the conditions for that limit. The appropriate test methods and procedures are identified with the corresponding emitting unit, as well.

2. Plant Wide

Roseburg is required to conduct weekly visual surveys to verify compliance with the opacity limitation identified for the plant. If Roseburg does not conduct weekly visual surveys, Roseburg is required to conduct semiannual Method 9 Source Tests to verify compliance with the opacity limitation. The Method 9 Source Tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual.

Roseburg is required to log the hours of operation of Line 1 on a monthly basis to monitor compliance with the rolling 12 month limitations in the permit.

Roseburg is required to certify compliance and/or maintain records to monitor compliance with several requirements in the Operating Permit for the plant wide conditions. The certifications and/or records shall indicate whether or not Roseburg is in compliance with the particular limit.

Roseburg shall calculate the daily and annual total particulate and PM<sub>10</sub> emissions in accordance with the equations provided in Section III.B.

3. Dryers Line 1 (DRY 100, DRY 101, DRY 102, DRY 103)

Roseburg shall conduct either a semiannual Method 9 source test or a weekly visual survey on the visible emissions from the combined stack for DRY 100, DRY 101, DRY 102, and DRY 103. Specifically, Roseburg is required to vent the emissions from DRY 100, DRY 101, DRY 102, and DRY 103 into one common combined stack.) Emissions from the combined stack for DRY 100, DRY 101, DRY 102 and DRY 103 may not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes. If weekly visual surveys are not conducted, Roseburg shall conduct semiannual Method 9 visual emission observations. The Method 9 Source Tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual.

Roseburg is required to perform Method 5 and Method 201A Source Tests once every 5 years to monitor compliance with the total PM and PM<sub>10</sub> emission limitations for DRY 100, DRY 101, DRY 102, and DRY 103. When Roseburg is venting the emissions from any combination of

DRY 100, DRY 101, DRY 102, and/or DRY 103 the applicable emission limitation will be the sum total of the emission limits of each of the sources venting through the combined stack at the time of the source test.

Roseburg is required to maintain records to monitor compliance with several requirements in the Operating Permit for the Line 1 Dryers. The recordkeeping shall indicate whether or not Roseburg is in compliance with the particular limit.

4. #1 Predryer (DRY 500)

Roseburg shall conduct either a semiannual Method 9 source test or weekly visual surveys on the visible emissions from DRY 500 to monitor compliance with the 20% opacity limitation. If weekly visual surveys are not conducted, Roseburg shall conduct semiannual Method 9 visual emission observations on the stack of DRY 500. The Method 9 Source Tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual.

Roseburg must perform Method 5 and Method 201A Source Tests every 5-years to monitor compliance with the total PM and PM<sub>10</sub> emission limitations.

Roseburg is required to maintain records to monitor compliance with several requirements in the Operating Permit for the predryer. The recordkeeping shall indicate whether or not Roseburg is in compliance with the particular limit.

13. Baghouses (BH 50, BH 55, BH 60, BH 100, BH 100R, BH 101A, BH 101B, BH 101R, BH 102A, BH 102B, BH 302A, BH 302B, BH 302R, BH 401, BH 401R, BH 500)

Roseburg shall conduct weekly visual surveys on the visible emissions from the baghouses to monitor compliance with the 20% opacity limitation. If weekly visual surveys are not conducted, Roseburg shall conduct semiannual Method 9 visual emission observations on the baghouse stacks. The Method 9 Source Tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual.

Roseburg must perform Method 2, Method 5, and Method 201A Source Tests as required by the Department to monitor compliance with the flow rate, total PM, and PM<sub>10</sub> emission limitations.

Roseburg shall conduct weekly visual surveys on the visible emissions from the combined stack for DRY 100, DRY 101, DRY 102, and DRY 103.) Emissions from the combined stack may not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes. If weekly visual surveys are not conducted, Roseburg shall conduct semiannual Method 9 visual emission observations. The Method 9 Source Tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual.

Roseburg is required to perform Method 5 and Method 201A Source Tests once every 5 years to monitor compliance with the total PM and PM<sub>10</sub> emission limitations for DRY 100, DRY 101, DRY 102, and DRY 103. When Roseburg is venting the emissions from any combination of DRY 100, DRY 101, DRY 102, and/or DRY 103 the applicable emission limitation will be the sum total emission limit of each of the sources venting through the combined stack at the time of the source test.



5. Press Vents 1, 2, 3, and 4 Line 1 (PRESS 100)

Roseburg shall conduct weekly visual surveys on the visible emissions from the press vents to monitor compliance with the 20% opacity limitation. If weekly visual surveys are not conducted, Roseburg shall conduct semiannual Method 9 visual emission observations on the press vents. The Method 9 Source Tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual.

Roseburg must perform Method 5 and Method 201A Source Tests, as required by the Department, to monitor compliance with the total PM and PM<sub>10</sub> emission limitations.

6. Line 1 Board Cooler Vents 1, 2, and 3

Roseburg shall conduct weekly visual surveys on the visible emissions from the board cooler vents to monitor compliance with the 20% opacity limitation. If weekly visual surveys are not conducted, Roseburg shall conduct semiannual Method 9 visual emission observations on the board cooler vents. The Method 9 Source Tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual.

Roseburg must perform Method 5 Source Tests, as required by the Department, to monitor compliance with the total PM emission limitations.

7. Boiler #1 (Boiler 1)

Roseburg shall conduct weekly visual surveys on the visible emissions from the boiler to monitor compliance with the 20% opacity limitation. If weekly visual surveys are not conducted, Roseburg shall conduct semiannual Method 9 visual emission observations on the boiler. The Method 9 Source Tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual.

Roseburg must perform Method 5 and Method 201A Source Tests, as required by the Department, to monitor compliance with the total PM and PM<sub>10</sub> emission limitations.

Roseburg is required to maintain records to monitor compliance with several requirements in the Operating Permit for the boiler. The records shall indicate whether or not Roseburg is in compliance with the particular limit.

8. Roemmc Burner (ROEMMC)

Roseburg shall conduct weekly visual surveys on the visible emissions from the Roemmc Burner to monitor compliance with the 20% opacity limitation. If weekly visual surveys are not conducted, Roseburg shall conduct semiannual Method 9 visual emission observations on the Roemmc Burner stack. The Method 9 Source Tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual.

Roseburg must perform Method 5, Method 7E, Method 10, and Method 18, Method 25, or Method 25A Source Tests, as required by the Department, to monitor compliance with the particulate from fuel combustion, NO<sub>x</sub>, CO, and VOC emission limitations.

Roseburg is required to maintain records to monitor compliance with several requirements in the Operating Permit for the Roemmc Burner. The records shall indicate whether or not Roseburg is in compliance with the particular limit.

#### 9. Solagen Burner (SOLAGEN)

Roseburg shall conduct weekly visual surveys on the visible emissions from the Solagen Burner to monitor compliance with the 20% opacity limitation. If weekly visual surveys are not conducted, Roseburg shall conduct semiannual Method 9 visual emission observations on the Solagen Burner stack. The Method 9 Source Tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual.

Roseburg must perform Method 5, Method 7E, Method 10, and Method 18, Method 25, or Method 25A Source Tests, as required by the Department, to monitor compliance with the particulate from fuel combustion, NO<sub>x</sub>, CO, and VOC emission limitations.

Roseburg is required to maintain records to monitor compliance with several requirements in the Operating Permit for the Solagen Burner. The records shall indicate whether or not Roseburg is in compliance with the particular limit.

#### 10. Regenerative Thermal Oxidizer (RTO)

Roseburg shall perform a Method 9 source test on the RTO within 180 days of initial startup to monitor compliance with the 10% opacity limitation. Thereafter, Roseburg shall conduct weekly visual surveys on the visible emissions from the RTO. If weekly visual surveys are not conducted, Roseburg shall conduct semiannual Method 9 visual emission observations. The Method 9 Source Tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual.

Roseburg shall monitor compliance with the particulate limitations for the RTO by conducting EPA Method 5 source testing within 180 days of initial start up of the RTO and thereafter, as required by the Department.

#### 11. Fugitives (FUG 50, FUG 51, FUG 52)

Roseburg shall conduct weekly visual surveys on the visible emissions from the fugitive emission sources to monitor compliance with the 20% opacity limitation. If weekly visual surveys are not conducted, Roseburg shall conduct semiannual Method 9 visual emission observations on the fugitive emissions sources. The Method 9 Source Tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual.

### **D. Recordkeeping Requirements**

The permittee is required to keep all records listed in the operating permit as a permanent business record for at least 5 years following the date of the generation of the record.

### **E. Reporting Requirements**

Reporting requirements are included in the permit for each emissions unit and Section V of the operating permit "General Conditions" explains the reporting requirements. However, the permittee is required to submit semiannual and annual monitoring reports to the Department and to annually certify compliance with the applicable requirements contained in the permit. The reports must include a list of all emission limit and monitoring deviations, the reason for any deviation, and the corrective action taken as a result of any deviation.

## F. Public Notice

In accordance with ARM 17.8.1232, a public notice was published in the *Missoulian* newspaper on or before May 20, 2013. The Department provided a 30-day public comment period on the draft operating permit from May 20, 2013 to June 19, 2013. ARM 17.8.1232 requires the Department to keep a record of both comments and issues raised during the public participation process. The comments and issues received by June 19, 2013 will be summarized, along with the Department's responses, in the following table. All comments received during the public comment period will be promptly forwarded to Roseburg so they may have an opportunity to respond to these comments as well.

### Summary of Public Comments

Person/Group Commenting	Comment	Department Response

## G. Draft Permit Comments

### Summary of Permittee Comments

Permit Reference	Permittee Comment	Department Response

### Summary of EPA Comments

Permit Reference	EPA Comment	Department Response

#### **SECTION IV. NON-APPLICABLE REQUIREMENT ANALYSIS**

Roseburg did not request a shield from any of the air quality Administrative Rules of Montana or federal regulations (pursuant to ARM 17.8.1214). Therefore, no further analysis of non-applicable requirements is necessary.

## **SECTION V. FUTURE PERMIT CONSIDERATIONS**

### **A. MACT Standards**

Roseburg is currently subject to 40 CFR 63, Subpart DDDD - Plywood and Composite Wood Products MACT, 40 CFR 63, Subpart DDDDD, National Emissions Standards for Hazardous Air Pollutants: Boiler and Process Heater, 40 CFR 63, Subpart A, General Provisions, and Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants: Reciprocating Internal Combustion Engine.

Note: Roseburg has historically used the Sanderdust Boiler gas to supplement the Roemmc exhaust gas for use in the dryers. As such, Roseburg noted that the Boiler is not subject to the Boiler NESHAP, Subpart DDDDD since its exhaust gas comes into direct contact with process materials. However, Roseburg submitted a significant permit modification (application for Title V OP # 2303-08) on February 27, 2013 to modify the boiler's configuration. When that permit action is complete, the Department will modify the OP and MAQP to include this requirement.

### **B. NESHAP Standards**

As of the date of permit issuance, the Department is unaware of any future NESHAP Standards that may be promulgated that will affect this facility.

### **C. NSPS Standards**

As of the date of permit issuance, the Department is unaware of any future NSPS Standards that may be promulgated that will affect this facility.

### **D. Risk Management Plan**

As of the date of permit issuance, this facility does not exceed the minimum threshold quantities for any regulated substance listed in 40 CFR 68.115 for any facility process. Consequently, this facility is not required to submit a Risk Management Plan.

If a facility has more than a threshold quantity of a regulated substance in a process, the facility must comply with 40 CFR 68 requirements no later 3 years after the date on which a regulated substance is first listed under 40 CFR 68.130; or the date on which a regulated substance is first present in more than a threshold quantity in a process, whichever is later.